

## ABSTRACT

[PROBLEMS] To provide a hydrophilic stiff main chain type liquid crystal of a synthetic helical polymer, which has not been provided conventionally, more specifically, a stiff main chain type liquid crystal being formed in a dense aqueous solution comprising a water-soluble salt of a synthetic helical polymer, and to provide a hydrophilic stiff main chain type liquid crystal which can be utilized as a chiral sensor.

[MEANS FOR SOLVING PROBLEMS] A hydrophilic stiff main chain type liquid crystal comprising a water-soluble salt of a synthetic helical polymer having no asymmetric carbon atom as a main component of the main chain thereof, for example, a polyacetylene derivative having such constitution; and a chiral sensor utilizing a liquid crystal comprising a water-soluble salt of the above synthetic helical polymer, in particular, a water-soluble salt of the above synthetic helical polymer having no asymmetric carbon atom.